

# **SWITCHING MODE VOLTAGE REGULATOR AND METHOD THEREOF**

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## **ABSTRACT OF THE DISCLOSURE**

10 A switching mode voltage regulator comprises a pulse  
width modulator and an adjustable one-shot circuit to generate an  
adjustable signal based on an input voltage, an adjustable voltage,  
and a PWM signal from the pulse width modulator at light loading  
to switch a high-side switch of an output stage in the voltage  
regulator. The ON duty of the adjustable signal is controlled by  
15 the adjustable voltage, such that it will be larger than that of the  
PWM signal and as a result, the number of switching the switch of  
the output stage is decreased, thereby reducing the switching loss  
and improving the efficiency of the voltage regulator.